DOCUMENT RESUME

ED 124 764 CE 007 392

AUTHOR	Crites, John O.
TITLE	A Comprehensive Model of Career Development in Early Adulthood. Occasional Paper No. 12.
INSTITUTION	Ohio State Univ., Columbus. Center for Vocational Education.
REPORT NO	VT-102-913
PUB DATE	75
NOTE	47p.
AVAILABLE FROM	Center for Vocational Education, Ohio State University, 1960 Kenny Road, Columbus, Ohio 43210 (Order Number OC12, $3.00)
EDRS PRICE	MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS	*Entry Workers; *Models; Social Psychology; Tests; *Vocational Adjustment; *Vocational Development; Work Attitudes; *Young Adults
IDENTIFIERS	Career Adjustment Inventory

ABSTRACT

The paper proposes a comprehensive model of career development in early adulthood and addresses some of the theoretical and research issues central to furthering knowledge of how and why young adults enter and adjust to their jobs. The disciplines of vocational and organizational psychology, adjustment and developmental psychology, and industrial and occupational sociology are invoked to identify and enumerate the theoretical salient variables. Then, relationships among these variables are explicated and hypotheses for research are deduced. Procedures are outlined by which these variables might be operationally defined and measured. Finally, there is a consideration of the applicability of the model to interventive programs designed to facilitate the job-entry process. Included is the "Career Adjustment Inventory," constructed to assess the effectiveness of these interventions and to measure relevant vocational behaviors. A three-page bibliography is also included. (Author/NJ)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED124764

Occasional Paper No. 12

A COMPREHENSIVE MODEL OF CAREER DEVELOPMENT IN EARLY ADULTHOOD

by John O. Crites

The Center for Vocational Education
The Ohio State University
Columbus, Ohio 43210

1975

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

CE006893

THE CENTER MISSION STATEMENT

The Center for Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning and preparation. The Center fulfills its mission by:

- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
- Installing educational programs and products
- Operating information systems and services
- Conducting leadership development and training programs

PREFACE

One of the most difficult problems facing our nation is assisting students in their transition from school to job entry. The transition encompasses a multitude of new coping experiences for the young worker such as adjustment to work supervision, job interviews, peer relations and adapting to large organizational settings. In response to this problem, The Center is pleased to publish this monograph, A Comprehensive Model of Career Development in Early Adulthood, prepared by Dr. John O. Crites, University of Maryland. The monograph represents The Center's continuing concern and investment in the school to work transition problem.

The monograph was especially written to enhance The Center's ongoing research and development program in Vocational Development and Adjustment. A major activity of the program has been to develop the Career Planning Support System which is intended as a comprehensive system to upgrade the career guidance and career education programs in high schools. One dimension of the Career Planning Support System focuses on mechanisms for facilitating the transition from school to work.

Dr. Crites has done an excellent job of proposing innovative models and instrumentation to deal with the transition problem. Historically, his monograph represents one of the first conceptualization efforts to systematically combine the major facets of job entry adjustment. His new career adjustment inventory provides a promising first step in attempting to measure a previously elusive construct.

VT 102 913

In addition to expressing appreciation to Dr. Crites, I would also like to acknowledge Center staff who have contributed to the development of the monograph: Dr. Robert E. Campbell, Program Director, Vocational Development and Adjustment Program Area; Dr. Evans Curry, Research and Development Specialist; and Mr. George A. Wynn, Program Assistant.

Robert E. Taylor
Director

A Comprehensive Model of Career Development in Early Adulthood

John O. Crites

University of Maryland

Since the concept of life-span career development was introduced by Super (1955) two decades ago, attention has been focused primarily upon the upper elementary and high school years, what he has called the Exploratory stage. Only more recently has interest been generated in the subsequent stages of career development and particularly in the Establishment stage, which encompasses early adulthood. This concern has roots in both theoretical and pragmatic considerations, the former because of ongoing research programs in vocational psychology, such as Super's Career Pattern Study, and the latter because of contemporary employment conditions which have exacerbated the problems of youth in making the transition from school to work. It is difficult to imagine a conceptual problem more salient than that of how and why young people enter and adjust to their jobs as they do. Not only is the optimal utilization of person-power in the marketplace at stake, but, because of the centrality of work in the life of the individual, the major sources of self-esteem, career satisfaction and success, hang in the balance.

Conceptualizations of this period embracing occupational entry have viewed it, however, from a circumscribed frame of reference, one which incorporates certain variables but not others. Thus, Super et al. (1963) emphasize developmental factors in job-entry, such as the

tasks which must be mastered, and Lofquist and Dawis (1969) propose a "congruence" model which relates worker abilities and needs to the work environment, but neither these nor others (e.g., Crites, 1969) comprehend the welter of variables which impinge upon career developmental processes in early adulthood. In their review of this problem, Haccoun and Campbell (1972, p. 3) conclude that "there exists a need for a model" of how neophyte workers adjust, and, drawing upon Lawler's (1971) formulation, they state that: "A 'proper' model should be able to (1) include all the identifiable and salient variables inherent in work adjustment, (2) show which stimulus conditions will create problems, (3) show the mechanisms by which problems may be alleviated, (4) propose hypotheses which may be operationalized and empirically verified." That a comprehensive model of career development in early adulthood needs to be formulated, in order to better understand and study the problem of youth in entering the world-of-work, is apparent.

The purpose of this paper is to make a "provisional try", as Pepinsky and Pepinsky (1954) call it, at constructing such a model. Several disciplines are first invoked to identify and ennumerate the variables which appear to be the theoretically salient ones for an analysis of early adult career development. These include vocational and organizational psychology, adjustment and developmental psychology, and industrial and occupational sociology. Then, relationships among these variables are explicated and in analysis of their sequential priorities and hypotheses for further research are deduced. Finally, procedures are outlined by which the variables might be operationally defined and measured, so that their hypothesized interrelationships might be subject to empirical tests. Accordingly, the paper has been

organized into three parts, generally following Lawler's (1971) specifications for a "proper" model, which explicate a comprehensive model of career development in early adulthood: (1) Elements of the Comprehensive Model; (2) Testing of the Comprehensive Model; and, (3) Application of the Comprehensive Model.

Elements of the Comprehensive Model

A sine qua non for the definition of developmental phenomena is that they be ontogenetic (Goulet & Baltes, 1970), whether the behaviors are mental, physical, social, or vocational. In others words, for a vocational behavior, e.g., choice of an occupation or performance of a job, to be termed developmental it is necessary to demonstrate that it is systematically related to time. Early on in developmental theory and research it was implicitly assumed that this relationship would be linear, but later analysis has made clear that other functions may be more appropriate for certain data trends. The so-called "satisfaction cycle", for example, starts at a high point at the time of occupational entry, dips to its nadir during the middle of the Establishment stage, positively accelerates into the Maintenance stage, then goes into an incipient decline through the remainder of the work life. This curve is clearly nonlinear but it is ontogenetic. The implication of the ontogenetic criterion is twofold: it differentiates career behaviors from other vocational behaviors which may not be related to time, and it distinguishes between career behaviors and other variables which influence them but are nondevelopmental status and demographic descriptors. That career behaviors must be time-related, by definition, also has import for operationalizing them: any measure of them must be shown to relate empirically to some index of time, e.g., age, grade,

tenure, etc. (Crites, 1974a).

Given time as an underlying definitional dimension of career development, observation of the kinds and rates of change in choice and adjustment behaviors along it indicates that the total span of the school and work life of most individuals can be subdivided into discernible stages. The years of career choice, prior to full-time gainful employment, have been variously designated the Exploratory stage by Super (1957), the Initial period by Miller and Form (1951, 1964), and Tentative period by Ginzberg et al. (1951). In all of these conceptualizations, there is also a succeeding stage which involves the transition from school to work, usually in early adulthood. The points-in-time at which one stage ends and another begins are arbitrary and approximate. They are best considered as permeable boundaries which symbolize the wide range of individual differences that exist in the age when career choices are made and jobs are entered. For most workers, the transitional period for moving from school to work is between ages 16 and 25. This marks the beginning of the Establishment stage, to ages 35 and 45. The Maintenance stage follows through to ages 55 and 70, after which the last stage of Retirement (deceleration and decline) continues until death. Of these stages perhaps the most critical is that of Establishment, during which the die is often cast for a career of success or failure (Hall & Schneider, 1973).

The problems facing all job-hunters, but especially those just out of school with little or no experience, are multifarious. Not only do they subsume the sheer necessity of finding work to support oneself, but they range across several levels of experience and functioning.

On the most general of these is the shift which occurs in value orientation when youth leave the school and enter the workplace. As shown in Table 1, the value systems of the home, school, and church, which are dominant during the Exploratory stage, differ markedly from those of the factory, office, and store, which are encountered in the world-of work (Miller & Form, 1951). Not infrequently beginning workers flounder due to dissonance in values occasioned by the disjunction between what they believe and what they are expected to believe. Then again they may flounder less for such universal philosophical issues than for more specific pragmatic reasons. In an extensive survey of the work entry problems of youth, Haccoun and Campbell (1972) have identified the two classes of problems ennumerated in Table 2. Each of these problems can be defined separately, but common to them all is a single parameter: they constitute "thwarting conditions" to the new worker in his/her attempts to become established in a job. To the extent that they are effectively handled the career development of the young adult, for both the present and the future, may be more or less facilitated.

For as Havighurst (1953) has observed, success with earlier developmental tasks is related to success with later ones. It would be expected, therefore, that high school students in the Exploratory stage who were more career-mature in their choice attitudes and competencies (Crites, 1973) would be better career-adjusted during the transition from school to work. Similarly, neophyte workers who coped relatively effectively with the problems of job entry should become established more firmly in their career than those who floundered during the induction process. This contingency element in career development

Table 1

Differences in Values between the School and Workplace

(From Miller & Form, 1951, p. 622)

Patterns and emergent values within the nonmonetary work plants of home, school, and church	Patterns and emergent values within the monetary work plants of factory, office, and store
1. PATTERN: Nonoptional membership VALUE: Each person belongs permanently to the group	PATTERN: Optional membership VALUE: Each worker must be free to enter or leave employment of any employer; each employer must be free to accept or reject any worker (upon cause) from his employment
2. PATTERN: Sympathetic cooperation VALUE: Each person should try to help the others	PATTERN: Competitive striving VALUE: Every worker guards his self interest if he wishes to hold his job or get ahead
3. PATTERN: Uniform moral code VALUE: Each person should do What is considered right	PATTERN: Ethical neutrality VALUE: Each person should be free to lead his own life without dictation from his employer or fellow workers
4. PATTERN: Personality growth VALUE: Each person should have an opportunity to develop to his fullest capacity	PATTERN: Work persistence VALUE: Each person should learn to stick on a job

5. PATTERN: Status devaluation	PATTERN: Status evaluation
VALUE: Each person should be evaluated for what he is and what he can do as a person	VALUE: Each person can be evaluated by his class, education, race, nationality, and religion

Table 2

Work Entry Problems of Youth

I. On the Job Performance Problems:

- Responsibility, Maturity, Attitudes and Values
- Work Habits
- Peer and Supervisory Adjustment
- Communication
- New Roles
- Automation and Changing Technology
- Self-Image
- Alienation

II. Job Entry, Career Planning and Management Problems

- Job-Seeking
- Interview and Test-Taking
- Geographic Mobility
- Family and Personal Situational Adjustment
- Job Layoffs and Rejections
- Educational Preparation and Job Placement
- Career Planning and Management
- Occupational Aspirations and Job Expectations
- Youth Image
- Military
- Prejudice and Discrimination
- Prior Work Experience
- Trade Unions

highlights the critical nature of the early Establishment stage: past performance is a powerful predictor of future performance. But this conjunction is not necessarily inexorable; it can be impacted by interventions, provided that they are relevant and potent. Research on changing the maturity of career attitudes, which are demonstrably related to success in training and in work, has shown that both counseling and didactic treatments can increase the maturity of career attitudes and presumably, therefore, enchance the success with which training and work tasks can be accomplished (Crites, 1971). Thus, although the thrust of career developemnt is deterministic, it is not immutable--it can be modified and redirected.

How workers adjust to their jobs, and which are the most effective ways, has not been extensively analyzed or investigated (Crites, 1969). What understanding there is on the dynamics of the career adjustment process has been largely extrapolated from adjustment and experimental psychology. Crites (1969) has proposed the model depicted in Figure 1 to schematize the factors involved in career adjustment and the sequence in which they occur. A motivated worker (1) encounters some thwarting condition (2), either frustration (external) or conflict (internal), which necessitates adjustive responses (3) in order to fulfill needs or reduce drives. If the worker copes effectively with the adjustment problem, a tension or anxiety reducing response (4) is made and career satisfaction and success (5) are achieved. To the extent that the problem is not integratively resolved, either with respect to the time dimension or social realities (Shaffer & Shoben, 1956), the worker is less well career-adjusted. The dynamics of this process are the same at all points on the continuum of career development

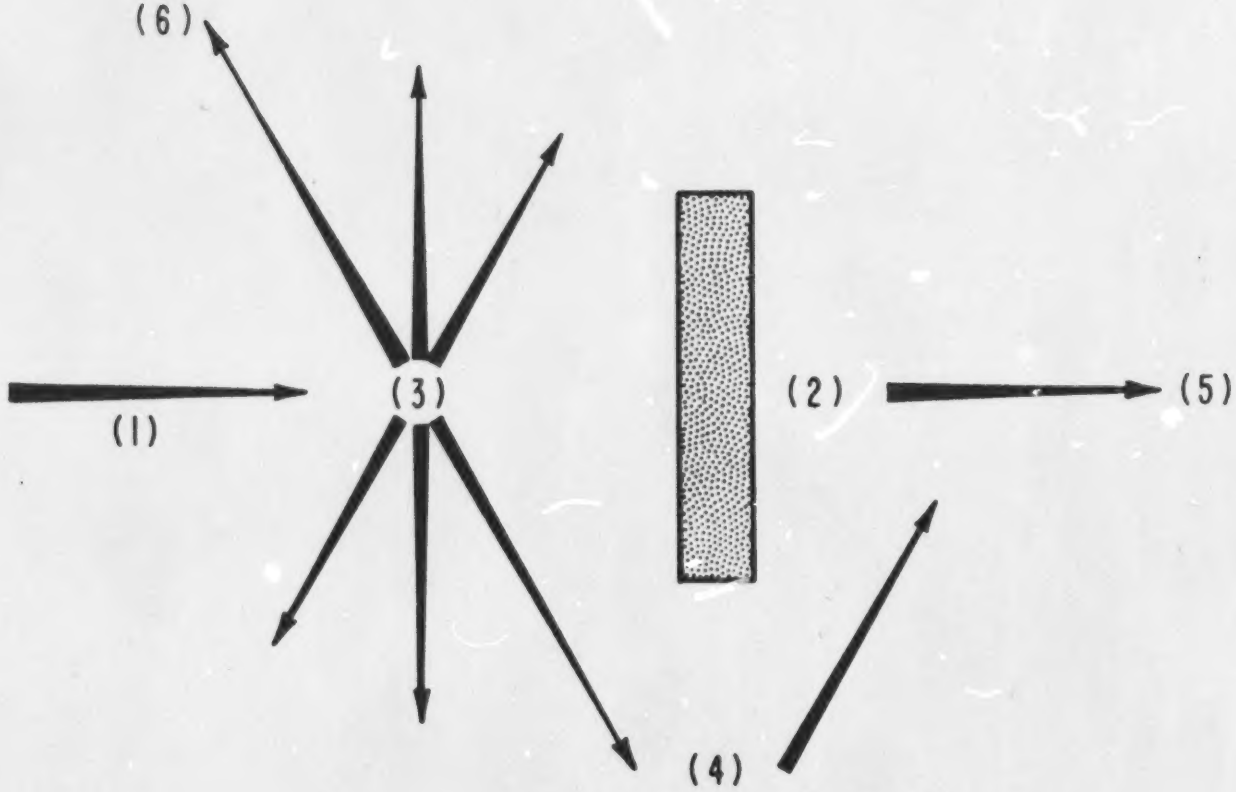


FIG. 1. A MODEL FOR THE PROCESS OF VOCATIONAL ADJUSTMENT. (CRITES, 1969)

but the content changes from one stage to another because workers mature and tasks change. The problems faced by early adult workers in the first years of the Exploratory stage, and the mechanisms in the Maintenance stage. Similarly, satisfaction and success, the outcomes of the career adjustment process, accrue different meanings at different points-in-time (Crites, 1969).

The distinction between the content and the process of career adjustment parallels a difference between what might be called congruence and coping in career adjustment. The analogue for these complementary, but separate, facets of career adjustment comes from an analysis of career choice in the preceding Exploratory stage. Crites (1974b) has identified two discernible aspects of decision making in this earlier period: choice content and choice process. The former refers to which occupation the individual should enter: accounting, nursing, engineering, etc.; the latter designates the steps the individual goes through to arrive at this decision. Similarly, in career adjustment congruence denotes the extent to which the worker "fits" the work environment, and coping encompasses the repertoire of response he/she uses to achieve congruence. Lofquist and Dawis (1969) have articulated a comprehensive congruence model of career adjustment, in which the central propositions relate the worker's abilities and needs to requirements and reinforcers in the work situation, but they do not make provision for coping mechanisms in their conceptual framework. Crites (1969, pp. 404-405) has suggested what some of these might be, e.g., compliance, control, compromise, and integration, and Super, Kowalski and Gotkin (1967) have added floundering, stagnation, trial,

instrumentation, and establishment; however, none of these ennumerations appears to be sufficient. Further theoretical work needs to be done on the identification and definition of coping mechanisms in career adjustment.

Both congruence and coping, as facets of career adjustment, take place within an interactive field defined by the worker and the work environment. They do not obtain in isolation from the milieu of the marketplace, yet until recently they have largely been treated out of this context. Hall and Schneieder (1973) and Hall (in press), among others, have noted, however, that there are critical points of interface between organizational climate and career adjustment. Drawing the analogy with environmental climate, they identify four basic features of organizational climate: "(1) leadership of supervisory style, (2) interpersonal relationships, (3) intrinsic meaning in work, and (4) extrinsic reward characteristics" (Hall & Schneider, 1973, p. 12). These aspects of organizational climate impinge on both congruence and coping in career adjustment. Litwin and Stringer (1968) have found, for example, that the greater the congruence between the worker's motives (see Figure 1) and the characteristics of the organizational climate the greater the probability of positive work products. Likewise, the ways in which workers cope with the problems and tasks they encounter in their work are often a function of organizational climate. In their study of priests, for example, Hall and Schneider (1973) found that the central organizational factor in career adjustment was the perceived challenge in the work itself, i.e., the intrinsic satisfaction derived from job performance. In other occupations such as insurance sales, it has been found that different parameters have been the most salient ones.

On an even more general level than the organization, and one which cuts across it, the reference group to which a worker belongs impacts the career adjustment process from beginning to end, but particularly during the early years of the Establishment stage. It is at this time in career development that the influence of cultural, sociological, psychological, and personal factors is crucial upon the occupational field and level into which the new worker is inducted. Cultural differences in America are largely regional, where dominant value systems shape the career orientations of prospective workers, so that their ethics, goals, time perspectives, and life syles vary from one part of the country to another. Within the broader realm of culture, sociological variables, especially socioeconomic status and family attitudes (Crites, 1969), exert an independent as well as an interactive influence upon career adjustment. Likewise, individual differences in such psychological traits as general aptitude, vocational interests, and certain personality characteristics have been well-documented as related to job entry, advancement, and tenure (Super & Crites, 1962). Also important in career adjustment are the worker's personal and group attributes: age, sex, ethnicity, race, language, education and training, and physical handicaps or disabilities. It is against a backdrop of these environmental and idiographic dimensions that the process of career adjustment unfolds, momentarily and continuously as the worker moves through time along the continuum of career development.

Dynamics of career adjustment, stage in the work life, organizational climate, environmental and psycho-social milieu: all of these are necessary elements of a comprehensive model of career development

in early adulthood. To represent their interrelationships graphically Figure 2 has been prepared. It illustrates how the process of career adjustment takes place within the organizational climate against a complex of background and status dimensions which span the entire course of career development from Exploration, through Establishment and Maintenance, to Retirement. The model focuses upon early adulthood, but, in its formal if not also its substantive characteristics, it should be applicable to other periods in career development as well. It encompasses most of the variables which are known (or have been hypothesized) to effect career adjustment, and therefore it should have heuristic value in explicating their interrelationships for both theory construction and hypothesis testing. It may also reveal lacunae in conceptualizations of career development which have not been recognized previously.

Testing the Comprehensive Model

To determine how well this model of early adult career development "fits" reality, it is necessary to specify the relationships which may obtain among the variables in it. It should be noted first that ultimately the variables it was designed to explain are the outcomes of the career adjustment process, satisfaction and success, at any given point-in-time during the work life of the individual. For the young adult, this moment is at occupational entry, when the problems listed in Table 2 are usually encountered. How well the new worker can solve these problems depends largely upon the interactions and other concatenations of variables in the model which affect and moderate career satisfaction and success. Because there are so many possible combinations of factors which separately or together may influence career adjustment,

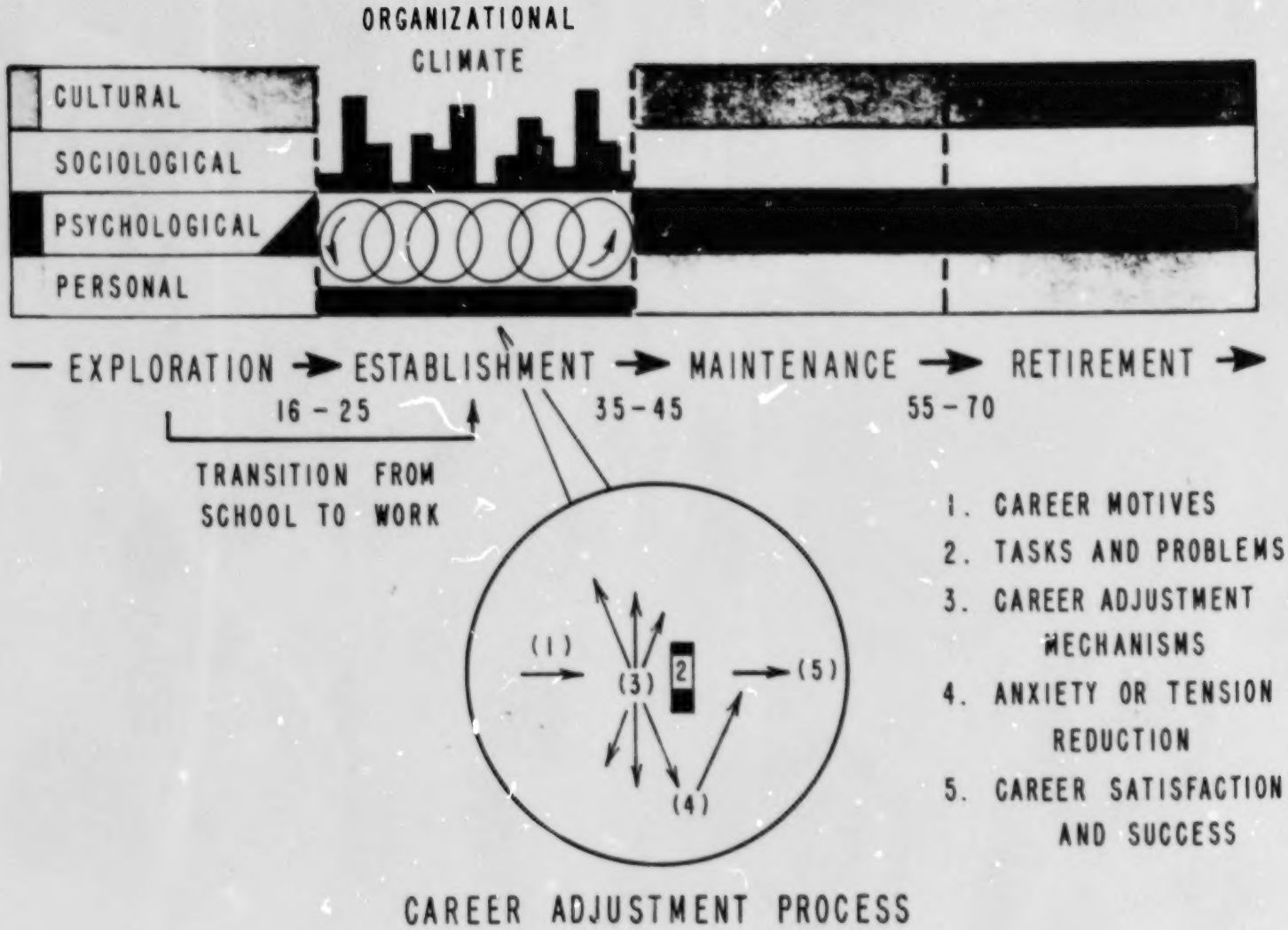


Figure 2. A Comprehensive Model of Career Adjustment in Early Adulthood.

and because empirical knowledge of their interrelationships is not sufficient to estimate their effects upon the dependent variables, as would be essential for such a methodology as path analysis (Duncan, 1966), only selected, illustrative hypotheses for testing the model have been articulated. They are focal to an understanding of career development in the period of transition from school to work, and, hopefully, they have sufficient generality to serve as analogues for other deductions from the model which are subject to empirical test.

As noted previously, it is a general hypothesis in developmental psychology that mastery of earlier tasks is positively related to success with later ones (Havighurst, 1953). Applied to the process of career development, this proposition would imply that those individuals who were more career-mature in their decision making during the Exploratory stage would be better adjusted (more satisfied and successful) in the initial years of the Establishment stage than those who were less career-mature in their choices before occupational entry. And, this prediction can be tested directly by administereing an instrument like the Career Maturity Inventory (CMI) (Crites, 1973) to 11th and 12th graders while still in school and then correlating it with a measure such as the Career Adjustment Inventory (see below) once they are on-the-job. It would be expected, however, that other variables in the model might moderate this relationship. For example, it is known from normative data on the CMI that ethnic and racial minority groups score less career-mature than their more advantaged peers (Crites, 1971), yet current organizational climates (e.g., fair employment practices, hard-core unemployed programs, etc.) may favor the entry career adjustments of minorities. The effect would be to overdetermine the recursive

relationship of career choice maturity to career adjustment. That is, since they would be less career-mature initially but better career-adjusted subsequently, the correlation would be lower for minorities than it would be for others.

In addition to minority group membership and organizational climate, a psychological variable which has been found related to more or less effective career adjustment at the beginning of the Establishment stage is personality. Stevens (1973, p. 213) has developed a job Placement Success Scale which evaluates the individual's transition from school to work along seven dimensions:

"...whether he (1) obtained a job; and if he did, whether it was in an (2) unpreferred setting [organizational climate] or in a preferred setting, (3) on a desired level, (4) in a desired field, (5) in a desired geographic location, (6) at a desired salary, and (7) within a specified period of time."

She found that this scale was highly related to a Placement Readiness Scale, defined by periods in the Exploratory stage corresponding to Fantasy (low placement readiness), Tentative (moderate placement readiness), and Realistic (high placement readiness) career decision-making. She also found that, in a group of 161 job-seeking males and females, placement readiness was associated with certain personality characteristics as measured by the Neurotic Scale Questionnaire. Those who were "ready" for placement, and who would presumably be placed successfully, were dominant, tough-minded, and less neurotic, whereas those who were not "ready" were submissive, sensitive, and more neurotic. Thus, these aspects of personality were directly related to initial career adjustment and indirectly correlated with career maturity in adolescence.

Still another variable which is confounded with the relationship of earlier with later career development, i.e., which may differentially affect adjustment at occupational entry, is the sex of the future worker. Longitudinal data from repeated measurements with the CMI-Attitude Scale over a period of six years (7th through 12th grades) indicate that there are sex differences in both the elevation and shape of career maturity curves. In the 7th grade, no statistically significant differences exist between males and females, but thereafter the latter are reliably more mature in their attitudes toward the career decision-making process (Rathburn, 1973). Furthermore, in the 12th grade the females reach the apogee of their career maturation, whereas the males actually regress significantly to a point approximately equivalent to the 10th grade. Why this regression in career development at a "choice-point" occurs is presently unknown, although a reasonable hypothesis is that the males are more apprehensive about entering the unknown, or even potentially hostile, world-of-work than the females (Crites, 1965). Whatever the reason, the implication is that females, who are more career-mature at the time of occupational entry, should make better career adjustments than males. In other words, the relationship of career choice maturity to career adjustment should be higher for women.

Perhaps one of the most potent dimensions which influences the outcomes of career adjustment, and which cuts across many of the others, is the sociological. Three models of what might be termed career paths (Crites, in press) can be delineated which trace the effects of these variables upon career adjustment, typically defined as occupational attainment. One of these is the social structural model of Blau and Duncan (1967), which is depicted in Figure 3. Based upon data from a

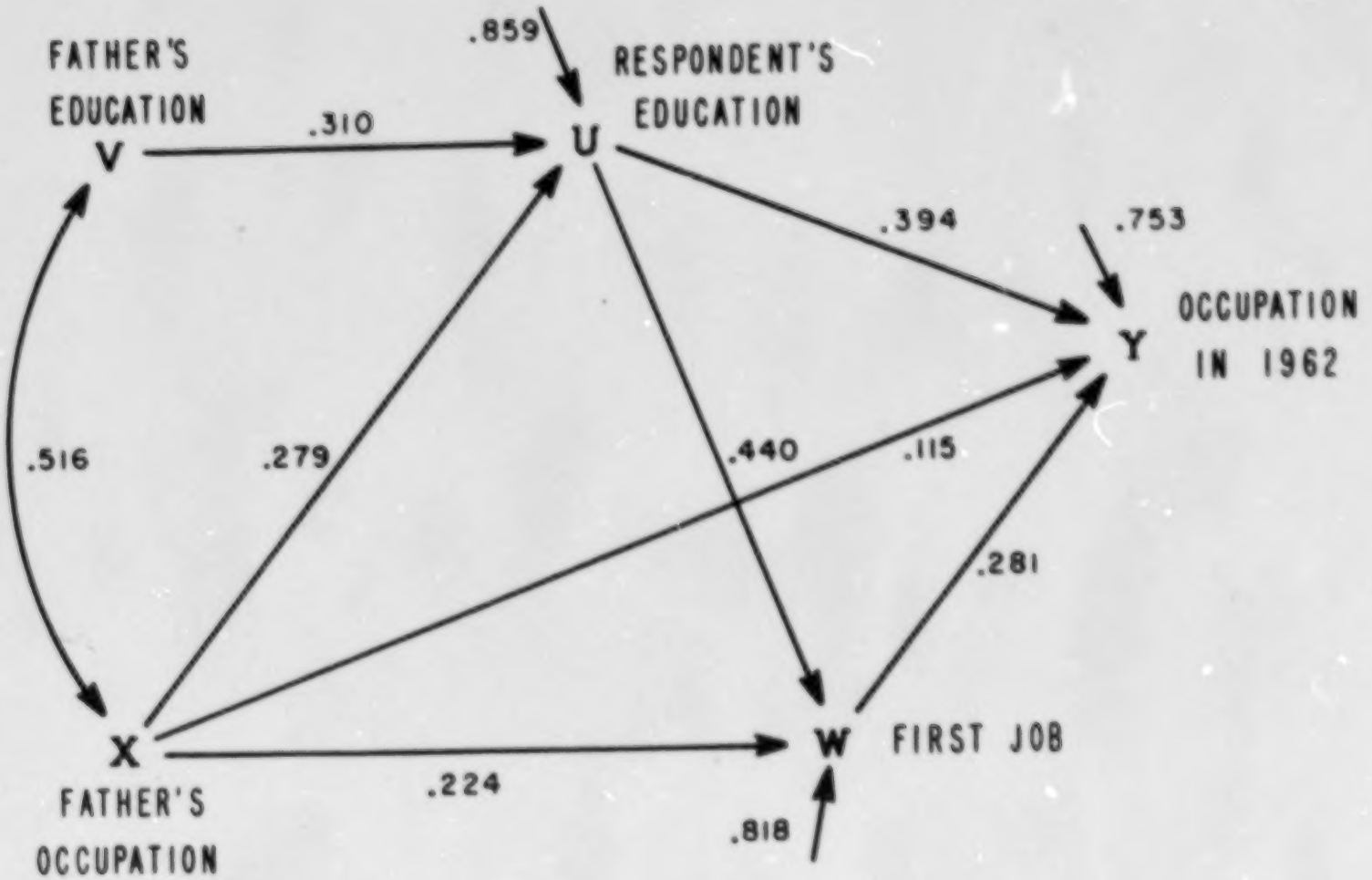


FIG. 3. A SOCIAL STRUCTURAL MODEL OF CAREER PATHS. (BLAU & DUNCAN, 1967, P. 170.)

large representative sampling (N = 20, 700) of men 20 to 64 years of age in 1962, it "posits as antecedents the education and occupation of the worker's father, which not only fix the initial level of the career path but which presumably influence directly and indirectly subsequent events in the system. Thus, father's occupation is hypothesized as having both a direct effect upon first job, and through it, an indirect influence upon later jobs. More proximate in time are the effects of the worker's educational level and his initial job upon his current employment, and so on with the other career path variables, including the sizeable contribution of those which have not as yet been incorporated into the model (the 'residual' paths)" (Crites, in press). The path coefficients shown in Figure 3 (with the exception of the .516 between Father's Education and Father's Occupation, which is a zero-order r) generally support the hypothesized relationships, with Respondent's Education contributing most to variance in both First Job and and Occupation in 1962. Of secondary salience is Father's Occupation in relation to Respondent's Education and First Job.

A second career path model, similar in broad outline to Blau and Duncan's but more comprehensive, has been formulated by Zafirau (1974) from data collected in the 1968 Survey Research Center presidential election study. Seventeen variables were defined from the responses of a sample of 1355 males and included: occupational socioeconomic status (attainment), education, social class, father and family variables, ethnoreligious characteristics, ecological descriptions, and other demographic information. In this model, the dependent variable was occupational socioeconomic status; the principal "intervening" variables were educational attainment and adult social class; and,

the significant independent variables were father's occupational socioeconomic status and family's social class. The sequential interrelationships of these variables were summarized by Zafirau (1974, p. 302) as follows:

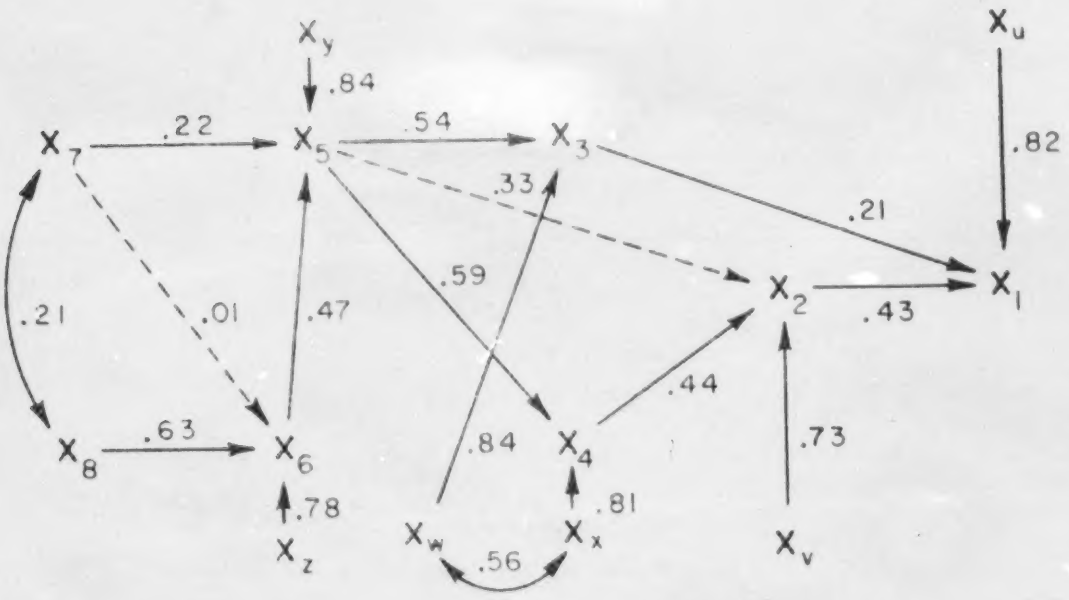
"Educational attainment, respondent's adult social class, and father's occupational socioeconomic status were found, in order, to have the largest path coefficients with the model's dependent variable. Father's occupational socioeconomic status, father farmer (negative), and family's social class were the best predictors of respondent's educational attainment. Following these three best predictors were, in order, high Protestant respondent, southern-born respondent (negative), and black respondent (negative)."

Again, as Blau and Duncan found, the single most important factor in career adjustment, defined as occupational status, was level of education attained.

The third model of career paths is the most general. Formulated by Sewell and others (Sewell, Haller, & Portes, 1969; Sewell, Haller, & Ohlendorf, 1970; Woelfel & Haller, 1971), it can be termed social psychological, since it comprehends certain psychological (e.g., mental ability) as well as sociological variables (Figure 4). In this schema, "it is proposed that the effects of the independent variables (Mental Ability and Socioeconomic Status) upon the dependent variables (Educational Attainment and Occupational Attainment) are mediated by the intervening variables (Significant Other's Influence, Levels of Educational and Occupational Aspiration, and Academic Performance)" (Crites, in press). The path coefficients on these hypothesized interrelationships, however, some of which are shown in Figure 4, fail to

substantiate the mediating role of the intervening variables, with the exception of Academic Performance. In fact, the empirical evidence indicates that it is the more strictly psychological "power" variables, viz., Mental Ability, Academic Performance, and Educational Attainment, which account both directly and indirectly for the major portion of the variance in Occupational Attainment. The other most potent predictor of the dependent variable is socioeconomic status. Empirically, then, all three models seem to reduce to essentially one career path: from socioeconomic status and academic ability through level of education achieved to occupational attainment in initial and subsequent jobs.

It should be noted that occupational attainment corresponds to career success but it is not equivalent to career adjustment, which also encompasses career satisfaction. Even career success is more inclusive than occupational attainment (Super, 1951), and, therefore, it should not be concluded that a social-psychological career path is sufficient to explain career adjustment. It does provide a point of departure, however, for hypothesizing what the roles of other variables may be. In particular, the effects of background and climate variables upon the dynamics of the career adjustment process need to be explicated. Both theory and research would suggest that career motives as well as thwarting conditions vary across status levels and from one organization to another. And, consequently, coping mechanisms are most likely different, depending upon the environmental and existential circumstances in which the individual is attempting to adjust. Thus, it might be expected that workers from lower and middle class backgrounds might cope quite differently in an authoritarian as compared with a democratic organizational climate. These and similar



X_1 OCCUPATIONAL ATTAINMENT

X_2 EDUCATIONAL ATTAINMENT

X_3 LEVEL OF OCCUPATIONAL ASPIRATION

X_4 LEVEL OF EDUCATIONAL ASPIRATION

X_5 SIGNIFICANT OTHERS' INFLUENCE

X_6 ACADEMIC PERFORMANCE

X_7 SOCIOECONOMIC STATUS

X_8 MENTAL ABILITY

FIG. 4. A SOCIAL PSYCHOLOGICAL MODEL OF CAREER PATHS. (SEWELL, ET AL., 1969, P. 85.)

hypotheses concerning the career adjustment process can be deduced from the variables in the comprehensive model and tested empirically as it is translated into operational terms.

Application of the Comprehensive Model

Some of the more global dimensions which serve as status and demographic descriptors in the model of early adult career development, such as socioeconomic status, can be readily assessed with existing indices. With somewhat less confidence, organizational climate can be measured by instruments (e.g., Hall & Schneider, 1973) constructed in recent years, but they usually have to be adapted substantively to the characteristics of the organization being appraised. Similarly, some of the variables in the career adjustment process have been quantified, although not extensively researched. Inventories of vocational motivation fall into this category (Crites, 1969). Assessment of career satisfaction and success, as the outcomes of career adjustment, can be extrapolated from indices of job satisfaction and job success; further work on their relationship to time needs to be accomplished. Probably the least well-defined variables operationally are those classified as "thwarting conditions" and "coping mechanisms" in Figure 1. About the only instrument which has been found that is relevant to these aspects of career adjustment is the Forer Vocational Survey (FVS), which consists of 80 incomplete sentences concerning causes of and reactions to various aspects of job situations, e.g., criticism, challenge, orders, and failure.

Clearly, the central need in operationalizing the process of career adjustment is in the construction of measures of how workers cope with a variety of thwarting conditions, which run the gamut from frustrating external circumstances to conflicting internal response

tendencies. The FVS is suggestive of salient behaviors to include, and might be used to gather open-ended responses for item content in a more structured inventory but it does not appear appropriate for large-scale use. Not only must it be subjectively scored, as is true of all incomplete sentence blanks, but it neither fits into a developmental theory of careers nor has demonstrable relationships to time. What is needed is an instrument specifically designed, both rationally and empirically, for the assessment of career adjustment mechanisms. A measurement model for such a device might be adapted from that developed for the Career Maturity Inventory (Crites, 1973), which was constructed to appraise career choice attitudes and career choice competencies during the preceding Exploratory stage. Two facets of it are directly relevant to the measurement of career adjustment: first, both the attitudes of the worker which impinge upon this process and the competencies which are used in it must be assessed; and, second, these variables must be rationally meaningful, in terms of career development theory, as well as empirically valid in relationships to time and other variables.

Consistent with these desiderata, a first form of what has been called the Career Adjustment Inventory (CAI) has been constructed (Appendix A). There are several parts to the CAI, each of which has been constituted rationally from career development concepts. Part I measures Career Involvement and comes largely from Lodahl and Kejner's (1965) research on job involvement, the item wording being changed slightly to cast it into the context of career development rather than a specific job. This variable was found by Roe and others (Crites, 1969) to be the most important factor in the career success and

satisfaction of scientists and other occupational groups. Part 2 assesses Career Control, which is defined as the worker's disposition to view his/her career as subject primarily to external circumstances or to internal determination and regulation. Rotter (1966) has explicated the role of internal locus of control in achieving more effective adjustment, and two unpublished studies of his I-E score in relation to the CMI-Attitude scale indicate that internally controlled individuals are more career-mature (r's .30-.35). Part 3 lists several Career Tasks which the individual must master at successive points-in-time throughout the work years, in order to mature from one stage to the next (Super, 1974). Still two other Parts on the problem-solving attitudes and competencies of youth at occupational entry, following Haccoun and Campbell's (1972) analysis of the problems encountered by neophyte workers during this stage of career development, are currently being developed. The empirical characteristics of the CAI remain to be established, although there is some evidence that both the Career Involvement (Lodahl & Kejner, 1965) and Career Tasks (Zelkowitz, 1975) scores are systematically related to age and, therefore, fulfill this necessary condition for the measurement of developmental variables.

Given that further psychometric work on the CAI demonstrates its reliability and validity, it could be used as a measure of the dependent variables in evaluating the effectiveness of that component of the Career Planning Support System[1] which pertains to the transition from

---

[1]The Career planning Support System is being developed to upgrade career guidance and career education in our nation's high schools. It has been developed in response to a welldocumented national need to provide an innovative, comprehensive delivery system which in effect

school to work. More specifically, in this program, eleventh and twelfth grade students are exposed to nine subunits (including the postunit) in which they learn about the problems they may encounter upon entry into the world-of-work and in which they survey how these problems might be solved. The latter process is subdivided into five steps: (1) diagnosing or defining the problem, (2) generating alternative solutions, (3) evaluating solutions in terms of feasibility and usefulness (4) choosing a solution and implementing it, and (5) verifying that the solution accomplished its ends. The expectation is that, as a result of this interventive experience, students will be better able to solve problems associated with job entry than if they had not participated in it. Some general, impressionistic questionnaires concerning the materials and procedures used in the subunits will be completed by teachers and students alike, but to demonstrate that behavioral change has taken place in coping mechanisms they must be measured before and after the problem-solving program and compared for "gains". The Career Adjustment Inventory, with the additon of the last part or Career Competencies (see above), can be used for this purpose.

Figure 5 shows how an experiment might ideally be conducted to evaluate the effectiveness of the transition from school to work

---

establishes a procedural vehicle for high schools to assess their needs, develop program goals, and student behavioral objectives and consequently, plan, design, and evaluate a program unique to their individual situation. The system has evolved systematically from a solid research base and field testing and includes the following products: Operation Guidance: The core procedural system of the Career Planning Support System and three supporting products: (1) Transition From School to work: "Coping in the World of Work: Practice in Problem Solving;" (2) Parent-Student Handbook On Sex Bias and Stereotyping: Implications For Career Plans; and (3) Sources of Influence On Career Decision Making And Its Impact On Career Attainment: A Handbook For Counselors and Educators.

PRETEST		POSTTEST		
E_1	O	X	O	SOLOMON FOUR-GROUP DESIGN
C_1	O		O	
E_2		X	O	
C_2			O	

Figure 5. Experimental Design for Evaluating CPSS.

component in CPSS. This is a Solomon Four-Group design, in which one set of Experimental (E) and Control (C) groups is both pre- and post-tested with the CAI, whereas the other set is only posttested. Given both of these paradigms, statistical tests can be conducted to determine whether the pretest, which is essential to derive "gain" scores, has a reactive effect, i.e., influences the behavior it is measuring. If it does, than it must be considered as part of the independent variable--in this case the problem-solving subunits. If it does not, then any effects on posttest can be attributed solely to the interventive program . Obviously, in a practical setting, it may not be possible to constitute the necessary groups for this type of experiment; in fact, it may be feasible to have only the E group. If this is the case, then it should nevertheless be pre- and posttested with the CAI to obtain at least presumptive evidence, in a quasi-experimental design (Campbell & Stanley, 1963), that changes in a more career-mature direction are occurring. Consistency of results from one school to another would then increase the probability that the problem-solving program generally facilitated career development in early adulthood.

Summary

The existential dilemma of youth entering the job market has been widely recognized but little understood. Nor have efforts been turned to assisting them in making the critical transition from school to work, which has such far-reaching ramifications for later career adjustment. This paper addresses some of the theoretical and research issues which are central to furthering our knowledge of how and why neophyte workers establish themselves in the world-of-work. It proposes a comprehensive model of career development in early adulthood, outlines ways in which

it can be translated into operational terms, and then considers it applicability to interventive programs designed to facilitate the job-entry process. As a new technique for assessing the effectiveness of these interventions, and as a measure of relevant vocational behaviors, the Careers Adjustement Inventory (CAI) was constructed and described.

References

Blau, P. M. & Duncan, O. D. The American occupational structure. New York: Wiley, 1967.

Campbell, D. T., & Stanley, J. G. Experimental and quasi-experimental designs for research. Chicago: Rand McNally, 1963.

Crites, J. O. Measurement of vocational maturity in adolescence: I. Attitude Test of the Vocational Development Inventory. Psychological Monographs, 1965, 79, (2, Whole No. 595).

Crites, J. O. Vocational psychology. New York: McGraw-Hill, 1969.

Crites, J. O. The maturity of vocational attitudes in adolescence. Inquiry Series, Monograph No. 2, Washington, D. C.: American Personnel and Guidance Association, 1972.

Crites, J. O. Theory and research handbook for the Career Maturity Inventory. Monterey, Ca.: CTB/McGraw-Hill, 1973.

Crites, J. O. Methodological issues in the measurement of career maturity. Measurement and Evaluation in Guidance, 1974, 6, 200-209. (a)

Crites, J. O. Reappraisal of vocational appraisal. Vocational Guidance Quarterly, 1974, 23, 272-279. (b)

Crites, J. O. Work and careers. In R. Dubin (Ed.), Handbook of work organization, and society. In press.

Duncan, O. D. Path analysis: Sociological examples. American Journal of Sociology, 1966, 72, 1-16.

Ginzberg, E., Ginsburg, S. W., Axelrad, S., & Herma, J. L. Occupational choice. New York: Columbia University Press, 1951.

Goulet, L. R., & Baltes, P. B. Life-span developmental psychology: Research and theory. New York: Academic Press, 1970.

Haccoun, R. R., & Campbell, R. E. Work entry problems of youth: A literature review. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University, 1972 (mimeo.).

Hall, D. T. Careers in organizations. Monterey, Ca.: Brooks/Cole, in press.

Hall, D. T. & Schneider, B. Organizational climates and careers. New York: Seminar, 1973.

Havighurst, R. J. Human development and education. New York: Longmans, 1953.

Lawler, E. E. Pay and organizational effectiveness: A psychological view. New York: McGraw-Hill, 1971.

Litwin, G. H., & Stringer, R. A., Jr. Motivation and organizational climate. Boston: Division of Research, Harvard Business School, 1968.

Lodahl, T. M., & Kejner, M. The definition and measurement of job involvement. Journal of Applied Psychology, 1965, 49, 24-33.

Lofquist, L. H., & Dawis, R. V. Adjustment to work. New York: Appleton Century-Crofts, 1969.

Miller, D. C., & Form, W. H. Industrial sociology. New York: Harper, 1951.

Miller, D. C., & Form, W. H. Industrial sociology, (2nd. ed.) New York: Harper and Row, 1964.

Pepinsky, H. B., & Pepinsky, P. N. Counseling: Theory and practice. New York: Ronald, 1954.

Rathburn, C. Career Maturity Inventory-Attitude Scale: Analyses of longitudinal data. Unpublished manuscript, University of Maryland, 1973.

Sewell, W. H., Haller, A. O., & Ohlendorf, G. W. The educational and early occupational status attainment process: Replication and revision. American Sociological Review, 1970, 35, 1014-1027.

Sewell, W. H., Haller, A. O., & Portes, A. The educational and early occupational attainment process. American Sociological Review, 1969, 34, 82-92.

Shaffer, L. F., & Shoben, E. J., Jr. The psychology of adjustment. (2nd. ed.) Boston: Houghton Mifflin, 1956.

Stevens, N. D. Job-seeking behavior: A segment of vocational development. Journal of Vocational Behavior, 1973, 3, 209-219.

Super, D. E. The criteria of vocational success. Occupations, 1951, 30, 5-8.

Super, D. E. The dimensions and measurement of vocational maturity. Teachers College Record, 1955, 57, 151-163.

Super, D. E. The psychology of careers. New York: Harper, 1957.

Super, D. E. Career Development Inventory (Adult Form). New York: Teachers College, Columbia University, 1974 (mimeo.).

Super, D. E., & Crites, J. O. Appraising vocational fitness. (Rev. ed.) New York: Harper and Row, 1962.

Super, D. E., Kowalski, R. S., & Gotkin, E. H. Floundering and trial after high school. New York: Teachers College, Columbia University, 1967 (mimeo.).

Super, D. E., Starishevsky, R., Matlin, N., & Jordaan, J. P. Career development: Self-concept theory, Princeton, N. J.: College Entrance Examination Board, 1963.

Woelfel, J., & Haller, A. O. Significant others, the self-reflexive act and the attituded formation process. American Sociological Review, 1971, 36, 74-87.

Zafirau, S. J. A developmental model for the occupational socio-economic status of American men. Journal of Vocational Behavior, 1974, 5, 293-305.

Zelkowitz, R. S. Personal communication, February, 1975.

Appendix A

The Career Adjustment Inventory

(Form 2)

Progress in your career depends upon many factors, some situational and others personal. Among the latter are your attitudes toward work, your perceptions of your job, and your development in pursuing your career. This inventory consists of statements about these aspects of career which may be valuable in your future planning and progress.

There are five parts to the inventory, each with different directions. Record your answers to the statements as indicated, following the specific directions for each part.

Part 1

1. I'll stay overtime to finish a job, even if I'm not paid for it.
2. You can measure a person pretty well by how good a job he does.
3. The major satisfaction in my life comes from my job.
4. For me, mornings at work really fly by.
5. I usually show up for work a little early to get things ready.
6. The most important things that happen to me involve my work.
7. Sometimes I lie awake at night thinking ahead to the next day's work.
8. I'm really a perfectionist about my work.
9. I feel depressed when I fail at something connected with my job.
10. I have other activities more important than my work.
11. I live, eat, and breathe my job.
12. I would probably keep working even if I didn't need the money.
13. Quite often I feel like staying home from work instead of coming in.
14. To me, my work is only a small part of who I am.
15. I am very much involved personally in my work.
16. I avoid taking on extra duties and responsibilities in my work.
17. I used to be more ambitious about my work than I am now.
18. Most things in life are more important than work.

19. I used to care more about my work, but now other things are more important to me.

20. Sometime I'd like to kick myself for the mistakes I make in my work.

Part 2

Directions: Listed below are several statements about how workers view their jobs and organizations. If you agree or mostly agree with a statement, blacken the space in the first column on your answer sheet. If you disagree or mostly disagree with a statement, blacken the space in the second column on your answer sheet.

21. I'd rather my boss told me how to do my job than to figure it out myself.

22. Nobody knows my job better than I do.

23. The organization should take care of its employees.

24. I usually agree with the organization's policies and procedures.

25. I work better on my own than in a group.

26. If my supervisor criticizes me, he's going to hear about it.

27. I like to plan my work and work my plan.

28. I think it's better to go along with what you're told to do than not.

29. I would like to set up my own organization and run it.

30. The most important thing to me on my job are my friends.

31. The organization will be the same whatever I do.

32. I want a chance to make my job over to fit me better.

33. I often feel I'm at the mercy of the organization I work for.

34. Why should I work harder when it doesn't seem to make any difference.

35. I question the goals of the organization I work for.

36. If I work hard, my chances for getting ahead are better.

37. Whatever job they give me in the organization is okay with me.

38. I feel responsible for my work.

39. I really don't know what's going to happen next when I go to work in the morning.

40. I know what I want out of my work and how to go about getting it.

Part 3

Directions: Listed below are a number of statements about entering and progressing in a career. If you have thought about or acted upon the statement, blacken the space in the first column on your answer sheet. If you have not thought about or acted upon the statement, blacken the space in the second column on your answer sheet.

41. Clarifying my ideas about the type of work I would like to do.

42. Deciding what kind of special training to get.

43. Getting started in my chosen field.

44. Settling down in a regular job.

45. Making a reputation in my line of work.

46. Planning how to get ahead in my field of work.

47. Maintaining the occupational position I have achieved.

48. Learning about recent changes in my field.

49. Using new methods and ideas on the job.

50. Finding ways to ease off in my work.

51. Finding an occupation that will allow for expression of my intersts and abilities.

52. Specializing in a field that has a future.

53. Choosing action steps that will help me achieve my ambitions.

54. Establishing myself occupationally.

55. Meeting people who can help me in my work.

56. Improving my chances of advancement.

57. Adapting to changes introduced since I got established in my job.

58. Discussing new developments with fellow workers.

59. Meeting new challenges as the job changes.

60. Concentrating on things I can do as I get older.

Part 4

Directions: Listed below are some statements about attitudes toward work. If you agree or mostly agree with a statement, blacken the space in the first column on your answer sheet. If you disagree or mostly disagree with a statement, blacken the second column on your answer sheet.

61. If there is a conflict between family and career, the family should come first.

62. I find the idea of getting and holding a job rather frightening.

63. I can't seem to find the kind of work I really want.

64. It's pointless to make specific career plans because the future is so uncertain.

65. I spend a lot of time wishing I could do work I know I can never do.

66. The best thing to do is to try out several jobs and then choose the one you like best.

67. To be happy in my career I must really accomplish something great.

68. There is really one suitable job for each of us.

69. I find work is largely dull and unpleasant.

70. It's whom you know, not what you know, that's importnat on a job.

71. The main reason for working is to earn enough money to live the kind of life outside your job that you like.

72. A person can do anything she/he wants as long as she/he tries hard.

73. It's probably just as easy to be successful in one occupation as in another.

74. I really can't find any occuption that has much appeal to me.

75. I think promotions should be based upon merit not seniority.

76. If you can't find what you wnat in one job, then move on to another.

77. Everybody should be their own boss.

78. The only thing that's really important in my career is getting ahead.

79. Sometimes things get rough on my job, but they always get better.

80. I often worry about what my job is going to be like in the future.

Part 5

Directions: Listed below are several typical job situations in which problems arise. If you were the worker, how would you handle the situation? Briefly describe what you would do or say in the space provided.

81. When Mark's supervisor said "Look, wel'll do it my way and that's all I want to hear about it", Mark said....

_____

_____

_____

82. Reprimanded by his boss for being absent and late too much, Frank....

_____

_____

_____

83. For several months Bev made suggestions about how her job might be improved, but they were always ignored or turned down. She....

_____

_____

_____

84. One of the best workers in Sam's section was Al, when he was sober, but he seemed to be drinking more and more. Sam....

_____

_____

_____

85. Linda liked her co-workers and where she worked, but she found her job boring and routine. She....

_____

_____

_____

86. Everytime Susan made a comment or expressed an opinion in a department meeting, Mac would criticize or ridicule her. She....

_____

_____

_____

87. Juan had been on this job for about six months now, but he still did not feel accepted by his co-workers. He....

_____

_____

_____

88. Jenny was outraged that Jean was promoted before she was, particularly since she had been on-the-job longer. Jenny....

_____

_____

_____

89. Sean's associates had always respected what he had to say in the past, but now they did not seem to listen to him as much. He....

_____

_____

_____

90. Sarah used to be very enthusiastic about her work, but recently she found it more and more difficut to be interested in it. She....

_____

_____

_____

91. As a company executive, Irv thought he should have a larger and better office, but he had been give a small, unattractive one. He....

_____

_____

_____

92. Darlene was the only woman in her unit and found herself isolated from the men with whom she worked. She....

93. Whenever Phil suggested to Dick how he might improve his work, Dick resented it and became angry. Phil....

94. Carolyn and Janet worked together, but Janet became increasingly upset with Carolyn's constant talking about her personal problems. Janet....

95. Steve had complained repeatedly about violations of safety precautions on-the-job, but no action was taken and a co-worker was seriously hurt. Steve....

96. Joyce was making ood money in selling, but she knew the product was defective and inferior. She....

97. Howard recommended Neal for a job, but now Neal was up for promotion ahead of Howard. Neal....

98. At mid-life, after twenty years in the same job, Bill found that he was increasingly dissatisfied with his work. He....

_____

_____

_____

99. Jody liked her job, but could not get along with her supervisor. She....

_____

_____

_____

100. Steve felt conflicted between doing an inferior job but getting it done on time and doing it the way he though it should be done but missing deadlines. He....

_____

_____

_____